Index to Human Factors – Volume 50, 2008

TABLE OF CONTENTS

Articulating the Differences Between Safety and Resilience: The Decision-Making Process of Professional Sea Fishing Skippers, *Gaël Morel, René Amalberti, and Christine Chauvin* 1

Cross-Modal Links Among Vision, Audition, and Touch in Complex Environments, *Thomas K. Ferris and Nadine B. Sarter* 17

Effect of Scaffold End Frame Carrying Strategies on Worker Stepping Response, Postural Stability, and Perceived Task Difficulty, *Hongwei Hsiao, Mathew Hause, John R. Powers, Jr., Tsui-Ying Kau, Scott Hendricks, and Peter I. Simeonov* 27

Inward Torque and High-Friction Handles Can Reduce Required Muscle Efforts for Torque Generation, *Na Jin Seo, Thomas J. Armstrong, Don B. Chaffin, and James A. Ashton-Miller* 37

Children's Posture and Muscle Activity at Different Computer Display Heights and During Paper Information Technology Use, *Leon Straker, Robin Burgess-Limerick, Clare Pollock, Jemma Coleman, Rachel Skoss, and Barbara Maslen* 49

Smooth Rotation of 2-D and 3-D Representations of Terrain: An Investigation Into the Utility of Visual Momentum, *Justin G. Hollands, Nada J. Pavlovic, Yukari Enomoto, and Haiying Jiang* 62

A Comparison of Broad Versus Deep Auditory Menu Structures, *Patrick M. Commarford, James R. Lewis, Janan Al-Awar Smither, and Marc D. Gentzler* 77

Tactile Displays: Guidance for Their Design and Application, *Lynette Jones and Nadine B. Sarter* 90

Everyday Expertise: Cognitive Demands in Diabetes Self-Management, *Katherine D. Lippa, Helen Altman Klein, and Valerie L. Shalin* 112

Determinants of Conflict Detection: A Model of Risk Judgments in Air Traffic Control, *Stéphanie Stankovic, Éric Raufaste, and Philippe Averty* 121

Detection of Emergency Vehicles: Driver Responses to Advance Warning in a Driving Simulator, *Michael G. Lenné, Thomas J. Triggs, Christine M. Mulvihill, Michael A. Regan, and Bruce F. Corben* 135

The Effect of Stimulus Modality on Signal Detection: Implications for Assessing the Safety of In-Vehicle Technology, *Natasha Merat and A. Hamish Jamson* . . 145

Enhanced Postural Stability Following Driver Training Is Associated With Positive Effects in Vehicle Kinematics During Cornering, *Andrew Petersen, Rod Barrett, and Steven Morrison* 159

The Relation Between Driving Experience and Recognition of Road Signs Relative to Their Locations, *Avinoam Borowsky, David Shinar, and Yisrael Parmet* 173

Investigating Pilot Performance Using Mixed-Modality Simulated Data Link, *Jeff A. Lancaster and John G. Casali* 183

Not All Trust Is Created Equal: Dispositional and History-Based Trust in Human-Automation Interactions, *Stephanie M. Merritt and Daniel R. Ilgen* 194

Effects of Age, Gender, and Target Location on Seated Reach Capacity and Posture, *Elodie Chateauroux and Xuguang Wang* 211

The Effect of Handle Friction and Inward or Outward Torque on Maximum Axial Push Force, *Na Jin Seo, Thomas J. Armstrong, Don B. Chaffin, and James A. Ashton-Miller* 227

Electromyographic Evaluation of a Bed Assistive Device for Abdominal Surgery Patients in Postoperative Care, *Grace Tran, Kari Babski-Reeves, and Maury A. Nussbaum* 237

The Effect of Head-Related Transfer Function Measurement Methodology on Localization Performance in Spatial Audio Interfaces, *Justin A. MacDonald and Phuong K. Tran* 256

A Comparison of Tactile, Visual, and Auditory Warnings for Rear-End Collision Prevention in Simulated Driving, *J. J. Scott and Robert Gray* 264

Differences in Day and Night Shift Clinical Performance in Anesthesiology, *Caroline G. L. Cao, Matthew B. Weinger, Jason Slagle, Chuan Zhou, Jennie Ou, Shakha Gillin, Bryant Sheh, and William Mazzei* 276

Perceptual Distortions Produce Multidimensional Stress Profiles in Novice Users of an Endoscopic Surgery Simulator, *Martina I. Klein, Joel S. Warm, Michael A. Riley, Gerald Matthews, Krishnanath Gaitonde, and James F. Donovan* 291

Effects of Brief Training on Use of Automated External Defibrillators by People Without Medical Expertise, *K. Blake Mitchell, Leo Gugerty, and Eric Muth* 301

The Impact of Night Vision Goggles on Way-Finding Performance and the Acquisition of Spatial Knowledge, *Michelle Sylvia Gauthier, Avi Parush, Todd Macuda, Denis Tang, Gregory Craig, and Sion Jennings* 311

Motion Sickness and Postural Sway in Console Video Games, *Thomas A. Stoffregen, Elise Faugloire, Ken Yoshida, Moira B. Flanagan, and Omar Merhi* . . 322

Postural Instability and Motion Sickness in a Virtual Moving Room, *Sébastien J. Villard, Moira B. Flanagan, Gina M. Albanese, and Thomas A. Stoffregen* 332

Preface to the Special 50th Anniversary Issue of *Human Factors*, *Nancy J. Cooke* 347

At the Turn of the 21st Century: Reflections on Our Science, *Eduardo Salas* 351

Human Factors in the 1990s: Sealing Transition Cracks, *William C. Howell* 354

Personal Reflections From the Fifth Editor of *Human Factors*, *Robert C. Williges* 359

A Flight by Periscope and Where It Landed, *Stanley N. Roscoe with revisions by Hector M. Acosta* 361

Human Factors in Industrial Systems: 40 Years On, *Colin G. Drury* 368

Myths and Realities of Electronics Maintenance, *Douglas H. Harris* 375
Looks Are (Almost) Everything: Where Drivers Look to Get Information, *David Shinar* 380
The Split Keyboard: An Ergonomics Success Story, *David Rempel* 385
A Critical Review of a Pivotal Scientific Contribution: Liles and Associates 24 Years Later, *William S. Marras* 393
Situation Awareness: Review of Mica Endsley's 1995 Articles on Situation Awareness Theory and Measurement, *Christopher D. Wickens* 397
Review of a Pivotal *Human Factors* Article: "Humans and Automation: Use, Misuse, Disuse, Abuse," *John D. Lee* 404
The Good, the Bad, and the Future: On the Archaeology of Ergonomics, *Neville Moray* 411
Risk, Human Error, and System Resilience: Fundamental Ideas, *Thomas B. Sheridan* 418
The Role of Expertise Research and Human Factors in Capturing, Explaining, and Producing Superior Performance, *Neil Charness and Michael Tuffiash* . . . 427
Vigilance Requires Hard Mental Work and Is Stressful, *Joel S. Warm, Raja Parasuraman, and Gerald Matthews* 433
Situation Awareness: Understanding Dynamic Environments, *Francis T. Durso and Arathi Sethumadhavan* 442
Multiple Resources and Mental Workload, *Christopher D. Wickens* 449
Naturalistic Decision Making, *Gary Klein* 456
Macroergonomics: Work System Analysis and Design, *Brian M. Kleiner* 461
Putting the Brain to Work: Neuroergonomics Past, Present, and Future, *Raja Parasuraman and Glenn F. Wilson* 468
Uncovering the Requirements of Cognitive Work, *Emilie M. Roth* 475
Human Factors Contributions to Knowledge Elicitation, *Robert R. Hoffman* 481
More Than 50 Years of History and Accomplishments in Human Performance Model Development, *Richard W. Pew* 489
Cognitive Architectures: Choreographing the Dance of Mental Operations With the Task Environment, *Wayne D. Gray* 497
Investigating Mode Errors on Automated Flight Decks: Illustrating the Problem-Driven, Cumulative, and Interdisciplinary Nature of Human Factors Research, *Nadine Sarter* 506
Humans: Still Vital After All These Years of Automation, *Raja Parasuraman and Christopher D. Wickens* 511
Fifty Years of Driving Safety Research, *John D. Lee* 521
On the Symbiotic Relationship Between Warnings Research and Forensics, *Kenneth R. Laughery and Michael S. Wogalter* 529
Human Factors and Education: Evolution and Contributions, *Nancy J. Stone* 534
On Teams, Teamwork, and Team Performance: Discoveries and Developments, *Eduardo Salas, Nancy J. Cooke, and Michael A. Rosen* 540
Aging and Human Performance, *Neil Charness* 548
Better Design of Menu Selection Systems Through Cognitive Psychology and Human Factors, *Kent L. Norman* 556
Discoveries and Developments in Human-Computer Interaction, *Deborah A. Boehm-Davis* 560
Testing a Multidimensional Nonveridical Aircraft Collision Avoidance System, *William R. Knecht* 565
Display Dimensionality and Conflict Geometry Effects on Maneuver Preferences for Resolving In-Flight Conflicts, *Lisa C. Thomas and Christopher D. Wickens* 576
Environmental Support: An Integrative Framework, *Daniel G. Morrow and Wendy A. Rogers* 589
Designing an Information Search Interface for Younger and Older Adults, *Richard Pak and Margaux M. Price* . . . 614
A Comparison of Four Office Chairs Utilizing Biomechanical Measures, *Tamara Reid Bush and Robert P. Hubbard* 629
Feedback Design for the Control of a Dynamic Multitasking System: Dissociating Outcome Feedback from Control Feedback, *Hansjörg Neth, Sangeet S. Khemlani, and Wayne D. Gray* 643
Evaluation of Pictorial Assembly Instructions for Young Children, *Cortney V. Martin and Tonya L. Smith-Jackson* 652
Evaluation of Ecological Interface Design for Nuclear Process Control: Situation Awareness Effects, *Catherine M. Burns, Gyrd Skraaning, Jr., Greg A. Jamieson, Nathan Lau, Jordanna Kwok, Robin Welch, and Gisle Andresen* 663
Assessing Design Features of Virtual Keyboards for Text Entry, *Marita A. O'Brien, Wendy A. Rogers, Arthur D. Fisk, and Mark Richman* 680
Visual Misperception in Aviation: Glide Path Performance in a Black Hole Environment, *Randy Gibb, Roger Schvaneveldt, and Rob Gray* 699
Effect of Task and Eccentricity of the Target on Detection Thresholds in Mesopic Vision: Implications for Road Lighting, *Anaïs Mayeur, Roland Brémond, and J. M. Christian Bastien* 712
Implicit Perceptions of Risk and Anxiety and Pilot Involvement in Hazardous Events, *Keryn A. Pauley, David O'Hare, Nadia W. Mullen, and Mark Wiggins* . . 723
Investigation of Grip Force, Normal Force, Contact Area, Hand Size, and Handle Size for Cylindrical Handles, *Na Jin Seo and Thomas J. Armstrong* 734
Human Factors of the Confirmation Bias in Intelligence Analysis: Decision Support From Graphical Evidence Landscapes, *Maia B. Cook and Harvey S. Smallman* . . 745
Linking Task Analysis to Information Relevance, *Francis T. Durso, Arathi Sethumadhavan, and Jerry Crutchfield* 755
Does Content Affect Whether Users Remember That Web Pages Were Hyperlinked? *Keith S. Jones, Timothy V. Ballew, and C. Adam Probst* 763
Assessing the Effectiveness of Interactive Media in Improving Drowsy Driver Safety, *Leila Takayama and Clifford Nass* 772
Blending Speech Output and Visual Text in the Multimodal Interface, *John Dowell and Yael Shmueli* 782
Multisensory Integration With a Head-Mounted Display: Sound Delivery and Self-Motion, *Matthew B. Thompson and Penelope M. Sanderson* 789

Accessibility of Radiology Equipment for Patients with Mobility Disabilities, *Molly Follette Story, Adam C. Luce, Alexander Leung, Elizabeth M. Omiatek, Melissa R. Lemke, and David M. Rempel* 801
Critical Roles for Distance, Task, and Motion in Space Perception: Initial Conceptual Framework and Practical Implications, *Patricia R. DeLucia* 811
On the Portability of Computer-Generated Presentations: The Effect of Text-Background Color Combinations on Text Legibility, *Massimo Greco, Natale Stucchi, Daniele Zavagno, and Barbara Marino* 821
Effects of Memory Rehearsal on Driver Performance: Experiment and Theoretical Account, *Dario D. Salvucci and Joanna Beltowska* 834
Warning Reliability and Driver Performance in Naturalistic Driving, *John M. Sullivan, Omer Tsimhoni, and Scott Bogard* 845
Acknowledgments (Volume 50) ii
Age-Related Differences in Reliance Behavior Attributable to Costs Within a Human-Decision Aid System, *Neta Ezer, Arthur D. Fisk, and Wendy A. Rogers* 853
Expertise Differences in Attentional Strategies Related to Pilot Decision Making, Angela T. Schriver, *Daniel G. Morrow, Christopher D. Wickens, and Donald A. Talleur* 864
Perceptual-Motor Performance and Associated Kinematics in Space, *Barry Fowler, Sean Meehan, and Anthony Singhal* 879
Effects of Simulator Practice and Real-World Experience on Cell-Phone-Related Driver Distraction, *Joel M. Cooper and David L. Strayer* 893
Does Team Training Improve Team Performance? A Meta-Analysis, *Eduardo Salas, Deborah DiazGranados, Cameron Klein, C. Shawn Burke, Kevin C. Stagl, Gerald F. Goodwin, and Stanley M. Halpin* 903

AUTHOR INDEX

Acosta, H. M., 361
Albanese, G. M., 332
Amalberti, R., 1
Andresen, G., 663
Armstrong, T. J., 37, 227, 734
Ashton-Miller, J. A., 37, 227
Averty, P., 121

Babski-Reeves, 237
Ballew, T. V., 763
Barrett, R., 159
Bastien, J. M. C., 712
Beltowska, J., 834
Boehm-Davis, D. A., 560
Bogard, S., 845
Borowsky, A., 173
Brémond, R., 712
Burgess-Limerick, R., 49
Burke, C. S., 903
Burns, C. M., 663
Bush, T. R., 629

Cao, C. G. L., 276
Casali, J. G., 183
Chaffin, D. B., 37, 227
Charness, N., 427, 548
Chateauroux, E., 211
Chauvin, C., 1
Coleman, J., 49
Commarford, P. M., 77
Cook, M. B., 745
Cooke, N. J., 347, 540
Cooper, J. M., 893
Corben, B. F., 135
Craig, G., 311
Crutchfield, J., 755

DeLucia, P. R., 811
DiazGranados, D., 903
Donovan, J. F., 291
Dowell, J., 782
Drury, C. G., 368
Durso, F. T., 442, 755

Enomoto, Y., 62
Ezer, N., 853

Faugloire, E., 322
Ferris, T. K., 17
Fisk, A. D., 680, 853
Flanagan, M. B., 322, 332
Fowler, B., 879

Gaitonde, K., 291
Gauthier, M. S., 311
Gentzler, M. D., 77
Gibb, R., 699
Gillin, S., 276
Goodwin, G. F., 903
Gray, R., 264, 699
Gray, W. D., 497, 643
Greco, M., 821
Gugerty, L., 301

Halpin, S. M., 903
Harris, D. H., 375
Hause, M., 27
Hendricks, S., 27
Hoffman, R. R., 481
Hollands, J. G., 62
Howell, W. C., 354
Hsiao, H., 27
Hubbard, R. P., 629

Ilgen, D. R., 194

Jamieson, G. A., 663
Jamson, A. H., 145
Jennings, S., 311
Jiang, H., 62
Jones, K. S., 763
Jones, L., 90

Kau, T.-Y., 27
Khemlani, S. S., 643
Klein, C., 903
Klein, G., 456
Klein, H. A., 112
Klein, M. I., 291
Kleiner, B. M., 461
Knecht, W. R., 565
Kwok, J., 663

Lancaster, J. A., 183
Lau, N., 663
Laughery, K. R., 529
Lee, J. D., 404, 521
Lemke, M. R., 801
Lenné, M. G., 135
Leung, A., 801
Lewis, J. R., 77
Lippa, K. D., 112
Luce, A. C., 801

MacDonald J. A., 256
Macuda, Y., 311
Marino, B., 821
Marras, W. S., 393
Martin, C. V., 652
Maslen, B., 49
Matthews, G., 291, 433
Mayeur, A., 712
Mazzei, W., 276
Meehan, S., 879
Merat, N., 145
Merhi, O., 322
Merritt, S. M., 194
Mitchell, K. B., 301
Moray, N., 411
Morel, G., 1
Morrison, S., 159
Morrow, D. G., 589, 864
Mullen, N. W., 723
Mulvihill, C. M., 135
Muth, E., 301

Nass, C., 772
Neth, H., 643
Norman, K. L., 556
Nussbaum, M. A., 237

O'Brien, M. A., 680
O'Hare, D., 723
Omiatek, E. M., 801
Ou, J., 276

Pak, R., 614
Parasuraman, R., 433, 468, 511
Parmet, Y., 173
Parush, A., 311
Pauley, K. A., 723
Pavlovic, N. J., 62
Petersen, A., 159
Pew, R. W., 489
Pollock, C., 49
Powers, J. R., Jr., 27
Price, M. M., 614
Probst, C. A., 763

Raufaste, E., 121
Regan, M. A., 135
Rempel, D. M., 385, 801
Richman, M., 680
Riley, M. A., 291
Rogers, W. A., 589, 680, 853
Roscoe, S. N., 361
Rosen, M. A., 540
Roth, E. M., 475

Salas, E., 351, 540, 903
Salvucci, D. D., 834
Sanderson, P. M., 789
Sarter, N. B., 17, 90, 506
Schriver, A. T., 864
Schvaneveldt, R., 699
Scott, J. J., 264
Seo, N. J., 37, 227, 734
Sethumadhavan, A., 442, 755
Shalin, V. L., 112
Sheh, B., 276
Sheridan, T. B., 418
Shinar, D., 173, 380
Shmueli, Y., 782
Simeonov, P. I., 27

Singhal, A., 879
Skoss, R., 49
Skraaning, G., Jr., 663
Slagle, J., 276
Smallman, H. S., 745
Smither, J. A.-A., 77
Smith-Jackson, T. L., 652
Stagl, K. C., 903
Stankovic, S., 121
Stoffregen, T. A., 322, 332
Stone, N. J., 534
Story, M. F., 801
Straker, L., 49
Strayer, D. L., 893
Stucchi, N., 821
Sullivan, J. M., 845
Takayama, L., 772
Talleur, D. A., 864
Tang, D., 311
Thomas, L. C., 576
Thompson, M. B., 789
Tran, G., 237
Tran, P. K., 256
Triggs, T. J., 135
Tsimhoni, O., 845
Tuffiash, M., 427

Villard, S. J., 332

Wang, X., 211
Warm, J. S., 291, 433
Weinger, M. B., 276
Welch, R., 663
Wickens, C. D., 397, 449, 511, 576, 864
Wiggins, M., 723
Williges, R. C., 359
Wilson, G. F., 468
Wogalter, M. S., 529

Yoshida, K., 322

Zavagno, D., 821
Zhou, C., 276

SUBJECT INDEX

3-D
  audio, 256
  displays, 62

Abdominal muscles, 237
Accessibility, 801
Accidents, 1, 418, 521, 529, 801
Accreditation, 534
Adaptive automation, 468, 511
Advisory warning, 135
Aerospace systems, 418, 489, 565, 576, 723, 864
Age differences, 680
Age-sensitive design, 589
Aging, 211, 548, 589, 614, 680, 801, 853
Air traffic control, 121, 755
Airborne separation assurance systems, 565
Alerts, 511
Anesthesiology, 276
Anthropometry, 629
Anxiety, 723
Approach lighting systems, 699
Assembly instructions, 652
Assistive devices, 237
Assistive technology, 548
Attention, 380, 449
  allocation, 643
Attentional processes, 276, 404, 433, 468, 489, 576, 772, 782, 834, 864
Audition, 256
Auditory displays, 789
Auditory interfaces, 256
Augmented contact displays, 361
Augmented displays, 361
Automated external defibrillators, 301
Automatic and controlled processing, 893
Automation, 173, 194, 375, 397, 404, 442, 468, 511, 853
Aviation, 427, 576, 864
  research, 699
  safety, 699
  visual illusions, 699
  visual perception, 699

Bed rising, 237
Biomechanics, 227, 385, 393, 629
Black hole illusion, 699
Boredom, 772
Bounded rationality, 497
Brain imaging, 433
Brain-computer interfaces, 468
Breadth versus depth, 77
Built environment design, 461, 629, 801

Car following, 893
Caregivers, 548
Cell phones, 893
Certification, 534
Chess, 427
Children, 49, 652
Citation analysis, 548
Citations, 368
Clinical task performance, 276
Clinical workload, 276
Cockpit display, 576
Cognition, 112, 397, 548, 589
Cognitive architecture, 489, 497
Cognitive engineering, 475
Cognitive modeling, 497
Cognitive processes, 62, 404, 442, 475, 540, 556, 614, 663, 723, 811, 834, 864
Cognitive reserve, 548
Cognitive science, 811
Cognitive systems engineering, 475
Cognitive task analysis, 456, 475, 481
Cognitive work analysis, 475
Collimation, 361
Collision
  avoidance, 521
  avoidance systems, 565, 811
  warnings, 264
Color, 821
Comfort, 629
Communication systems, 418, 772
Communications, 529
Complex systems, 1
  management, 643
Compliance, 511
Comprehension, 442
Computer systems, 468, 540, 556, 560, 614, 663, 763, 772
Computers, 49
Concept mapping, 481
Conflict
  avoidance, 576
  detection, 121
Console video games, 322
Construction, 27, 652
Consumer products, 652
Contact
  area, 734
  force, 734
Contrast, 821
Controlled flight into terrain, 699
Costs, 853
Crew behavior, 183, 489, 723
Critical decision method, 481
Criticality frequency, 755
Cross-modal links in attention, 17
Cross-modal spatial cuing, 17
Cross-training, 903
Cuing asymmetries, 17
Cutaneous sensation, 90
Data link, 183
Day-night shift work, 276
Debiasing, 745
Decision
  aids, 853
  making, 1, 112, 404, 456, 475, 511, 663, 723, 745, 853, 864
  support systems, 745
Depth perception, 811
Design, 442, 548, 680
  guidelines, 652
Detection, 173, 264
  threshold, 712
Diabetes, 112
Differential access hypothesis, 481
Disability, 801
Display
  contrast, 361
  design, 755
  height, 49
  magnification, 361
Display-control compatibility, 643
Displays, 264, 782
  and controls, 62, 385, 565, 576, 643, 663, 745, 821
Distance perception, 361
Distraction, 521, 893
Double-task paradigm, 712
Driver
  behavior, 159, 173, 380, 489, 521, 772, 811, 834, 845, 893
  distraction, 145
  expectations, 173
  performance, 834
  safety, 264, 521
  training, 159
Driving, 546, 811
  simulator, 135, 772
  skill acquisition, 380
Drowsy driving, 772
Dual tasks, 879
Dual-task performance, 772, 782, 834, 893
Dundee Stress State Questionnaire, 291
Dynamic decision making, 643

Earpiece, 789
Ecological interface design, 663
Ecological validity, 481
Editor
  commentary, 351
  reflections, 354, 351, 359
Editorial duties, 354, 359
Education, 534, 540, 903
Electromyography, 49, 237
Electronics maintenance, 375
Emergency vehicles, 135
Endoscopic surgery
  performance, 291
  simulator, 291

Environmental support, 548, 589
Epidemiology, 393
Error, 418, 548
Euclidean distance, 755
Evaluation methods, 560
Experience, 893
Expert
  performance, 427
  systems, 173, 194, 481
  witnesses, 529
Expertise, 112, 427, 864
  studies, 481
Expert-novice differences, 173
Explicitness, 529
Extended mind hypothesis, 497
Eye
  movements, 173, 380
  tracking, 427

Falls, 27
Fatigue, 276
Featureless terrain illusion, 699
Feedback design, 643
Field of view, 361
Fitts' law, 560, 879
Flight communications, 183
Flight deck automation, 506
Focal distance, 361
Forensics, 529
Free-field sound, 789
Friction, 227
Function allocation, 194
Functional analysis, 643

Gender, 211
Genetics, 468
Gerontechnology, 548
Glide-path performance deviations, 699
Goals, operators, methods, and selection rules (GOMS), 548
Graphic syntax, 652
Grip
  biomechanics, 734
  force, 734
  distribution, 37
Groupware, 540
Guidelines, 560

Hand
  area, 734
  biomechanics, 37
  ergonomics, 37
  size, 734
  torque direction, 37
Handle
  friction, 37
  size, 734
Haptic
  displays, 264
  interfaces, 90
Hazards, 529
Head-mounted displays, 789
Head-related transfer functions, 256
Head-up displays, 361
Health and medical systems, 276, 801
Hearing, 264
Helmet-mounted displays, 361
Highway and vehicle design, 521
Highway safety, 811
Home health care, 112
Human brain function, 468
Human error, 418, 521, 529, 801
Human Factors
  anniversary of, 347
  contributions of, 377
  history of, 347, 354
  impact of, 347
Human factors/ergonomics, 347, 427, 534
  history, 411, 489
  practice, 351
  principles, 351
  science, 351
  theory, 351
Human performance, 548, 789
  modeling, 489, 643
Human reliability, 489
Human-computer interaction, 468, 511, 556, 560, 589, 614, 763, 772, 782
Hyperlinks, 763
Hypothesis testing, 745

Implicit associations, 723
Incidental learning, 680
Individual differences, 121, 194, 468, 723
Industrial engineering, 368
Industrial systems, 368
Information analysis, 511
Inhibition of return, 17
Input devices, 385, 680
Inspection, 368
Instructional systems, 534, 540, 903
Instructions, 652
Integrated cognitive systems, 643
Intelligence analysis, 745
Interactive media, 772
Interactive routines, 497
Interactive voice response, 77
Interactivity, 772
Interdisciplinary research, 506
Interface
  design, 556
  evaluation, 560, 614, 663, 772
Interindividual difference, 548
Internet, 763
Intraindividual change, 548
In-vehicle information system safety, 145
In-vehicle technology, 135, 145, 521

Judgment, 404, 456

Keyboards, 385, 680
Kinematics, 629, 879
Knowledge
  elicitation, 481
  management, 481
  representation, 481

Language comprehension, 589
Lateral accelerations, 159
Lateral drift warning, 845
Learning, 723
Legibility, 821
Listening, 782
Litigation, 529
Local architecture, 763
Low back disorders, 393
Low back pain, 393

Macro design features, 418
Macrocognition, 456
Macroergonomics and the environment, 418, 461, 629, 801
Maintenance burden, 375
Mandelbaum effect, 361
Manual control, 489
Manufacturing, 418
Maritime safety, 1
Medical devices, 301, 801
Medical equipment, 801
Medical expertise, 301
Medicine, 427

Memory, 589, 723, 763, 782, 834
  capacity, 77
  rehearsal, 834
Mental models, 442, 506
Mental operations, 497
Mental representation, 763
Mental workload, 183, 433, 449, 468, 489
Menu, 614
  design, 556
  navigation, 556
  selection, 556
  structure, 77
Mesopic vision, 712
Methodology, 351, 481
Microelectronics, 374
Microgravity, 879
Mobile displays, 782
Mode awareness, 506
Mode error, 506
Modeling, 548, 560
Models and measures, 629, 734
Monitoring, 276, 433, 468, 506, 643
Monotony, 772
Moon illusion, 361
Motion
  perception, 811
  sickness, 322, 332
Movement, 680
Moving rooms, 332

Multidimensional stress profiles, 291
Multimedia, 534, 782
Multimodal displays, 90, 17, 264, 789
Multimodal interfaces, 782
  design, 17
Multiple resources, 449, 879, 893
Multisensory integration, 789
Multitasking, 643
Muscle activity, 49
Musculoskeletal disorders, 385, 393
Music, 427

Naturalistic decision making, 456, 475, 663, 723, 745, 864
Neural noise, 548
Neuroengineering, 468
Neuroergonomics, 433, 468
Neuroimaging, 811
Neuropsychology, 811
Neuroscience, 811
Night vision goggles, 311
Nonveridical displays, 565
Normal force, 734
Nuclear power, 663

Object displays, 565, 576, 663, 745, 821
Objective measures, 629
Office
  chairs, 629
  ergonomics, 385
Older adults, 211
  reach capacity of, 211
Organizational behavior, 418, 461
Organizational design, 461
Oscillating virtual environment, 332
Overexertion, 27

Patient safety, 801
Perceived size, 361
Perception, 548
Perceptual processes, 789
Perceptual-motor processes, 811
Peripheral detection task, 145
Periscopic display, 361
Photopic luminous transmittance, 361
Physical work, 237
Pictorial displays, 565, 576, 821
Pictorial instructions, 652
Pilot-automation interaction, 506
Piloting, 548
Pilots, 183, 489, 723, 864
Pivotal articles, 347
Play, 652
Postoperative care, 237
Postoperative interventions, 237
Postural instability, 332
Postural motion, 322
Postural stability, 159
Postural sway, 27
Posture, 49, 211
Practice, 893

Prediction, 411
Priming, 135
Problem solving, 663
Process control, 643, 663
  systems, 418
Products, 529
Protocol analysis, 427
Psychological states, 194, 276, 433, 772
Psychomotor processes, 380
Publication activities, 354, 359
Push, 227

Reach, 211
  capacity, 211
  posture, 211
Reaction time, 893
Reading, 782
Reasoning, 663
Recognition, 173
Recognition-primed decision model, 456
Redundancy, 782
Relevance, 755
Reliability, 418
  issues, 418
Reliance, 511, 853
Residency training, 276
Resilience, 1, 418
Resource theory, 433
Response time, 27, 135
Retrospective, 354
Risk, 418
  judgments, 121
  perception, 529, 723
  taking, 723
Road lighting design, 712
Robotic assistant, 548
Rotary controller, 680

Safety, 1, 418, 521, 529, 801, 845
Schemata, 173
Seating mechanics, 629
Self-motion, 789
Self-transfer aids, 237
Sensory and perceptual processes, 173, 380, 712, 811, 821
Sensory-motor performance, 879
Serial recall, 834
Side tasks, 782
Signal detection, 145
Simulation, 427, 489, 534, 548, 893
Simulator Sickness Questionnaire, 322, 332
Situation awareness, 183, 397, 442, 663
Skill, 173, 427
  acquisition, 427
  development, 159
Sleep deprivation, 276
Small screens, 782
Sociotechnical systems, 1

Space perception, 811
Spaceflight, 879
Spatial audio, 256
Spatial knowledge, 311
Spatial learning, 311
Special topics, 354, 359
Speech
  output, 782
  system, 77
Sports, 427
Strategic flight planning, 576
Stress, 433
Stressors, 879
Student learning, 534
Subjective reliability, 845
Supervisory control, 643
Surface transportation systems, 173, 380, 521, 772, 893
Surveys, 368
System
  design, 418
  design features, 183, 418, 565

Tacit knowledge, 481
Tactile interfaces, 90
Target
  angular size, 361
  brightness, 361
  search, 311
Task
  analysis, 755
  environment, 497
Task-induced stress, 291
Team
  development, 903
  effectiveness, 903
  intervention, 903
  performance, 540, 903
  performance improvement, 903
  processes, 903
  training, 903
Teams, 540
Teamwork, 540, 903
Technology, 548
  acceptance, 404
Text entry, 680
Texture gradient, 361
Time-sharing, 449
Tonic focus, 361
Topographic maps, 62
Torque, 227
Touch, 17, 90, 264
Toy assembly, 652
Tracking, 380
Traffic sign identification, 173
Training, 301, 311, 534, 540, 548, 893
  evaluation, 903
  methods, 903
  outcomes, 903
  technologies, 375, 903
Transfer, 680, 893
Transportation, 811

Troubleshooting, 375
Trust, 194, 404, 511

Unit task, 497, 643
Upper body, 211
Usability, 301, 548, 560, 614, 652, 663, 763, 772, 801
  testing, 680, 801
Use, misuse, disuse, 404

Vehicle dynamics, 159
Ventriloquism, 789
Verification, 853
Video games, 322
Vigilance, 276, 433, 468
Virtual reality, 332, 489, 534
Vision, 173, 264, 380, 811, 821
Visual accommodation, 361
Visual displays, 565, 576, 789, 821
Visual momentum, 62
Visual perception, 311, 811
Visual search, 680
Visualization, 745

Warnings, 529
Wayfinding, 311
Weather-related decision making, 723
Work, 548
  design, 461
  domain analysis, 475
  physiology, 385, physiology, 629
  space, 211
  system, 461
Working memory, 77
Workplace
  design, 368
  performance, 548
Workspace design, 629, 801